522 Rec'd PCT/PTO 17 JAN 2001

FORM PTO-1390 (REV. 1-98) U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER	
0365-0491P	
U.S. APPLICATION NO. (If known, see 37 CFR 1.5)	
09/743916	

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/FI99/00630	15 JULY 1998	17 JULY 1998

TITLE OF INVENTION

METHOD AND SYSTEM FOR CONTROLLING AN INTERNET SERVICE

APPLICANT(S) FOR DO/EO/US

SALMINEN, Kai; HARMA, Mika; KYLA-REKOLA, Matti; SALSTE, Tuomas

OIPE JAN 17 2001 PATENT & TRADEMARK OFFICE

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39 (1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date
5. ☒ A copy of the International Application as filed (35 U.S C. 371(c)(2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(3))
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C 371(c)(2)).
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98./International Search Report with cited references

12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. ☒ A FIRST preliminary amendment.
    ☐ A SECOND or SUBSEQUENT preliminary amendment.

14. ☐ A substitute specification.

15. ☐ A change of power of attorney and/or address letter.

16. ☒ Other items or information:
    FORM PCT/IPEA/401 - PCT DEMAND
    FORM PCT/IPEA/409 - INTERNATIONAL PRELIMINARY EXAMINATION REPORT
    TWO (2) SHEETS OF FORMAL DRAWINGS
    REQUEST FORM PCT/RO/101

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U.S. APPLICATION NO (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO	ATTORNEY'S DOCKET NUMBER
NEW 09/743916	PCT/FI99/00630	0365-0491P

17. ☒ The following fees are submitted:	CALCULATIONS	PTO USE ONLY
BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5):		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1,000.00**		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO **$860.00**		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO. **$710.00**		
International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$690.00**		
International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4). **$100.00**		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ **1,000.00**	
Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☒ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$ **130.00**	

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	3 - 20 =	0	X **$18.00**	$ **0**	
Independent Claims	2 - 3 =	0	X **$80.00**	$ **0**	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)		NO	+ **$270.00**	$ **0**	
TOTAL OF ABOVE CALCULATIONS =				$ **1,130.00**	
Reduction of ½ for filing by small entity, if applicable. Applicant claims Small Entity Status in accordance with 37 CFR 1.27.				$ **0**	
SUBTOTAL =				$ **1,130.00**	
Processing fee of **$130.00** for furnishing the English translation later than ☐20 ☐30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$ **0**	
TOTAL NATIONAL FEE =				$ **1,130.00**	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property +				$ **0**	
TOTAL FEES ENCLOSED =				$ **1,130.00**	
				Amount to be: refunded	$
				charged	$

a. ☒ A check in the amount of $ **1,300.00** to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account. No. _____ in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-2448.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

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James M. Slattery
SIGNATURE

SLATTERY, JAMES M.
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#28,380 (JMS)
REGISTRATION NO

/gf January 17, 2001

(REV. 12/11/2000)

09/743916
528 Rec'd PCT/PTO 17 JAN 2001

PATENT
0365-0491P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant:	SALMINEN, Kai et al.		
Int'l. Appl. No.:	PCT/FI99/00630		
Appl. No.:	NEW	Group:	Unassigned
Filed:	January 17, 2001	Examiner:	UNASSIGNED
For:	METHOD AND SYSTEM FOR CONTROLLING AN INTERNET SERVICE		

PRELIMINARY AMENDMENT

BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, DC 20231

January 17, 2001

Sir:

The following Preliminary Amendments and Remarks are respectfully submitted in connection with the above-identified application.

AMENDMENTS

IN THE SPECIFICATION:

Please amend the specification as follows:

Before line 1, insert --This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/FI99/00630 which has an International filing date of July 15, 1999, which designated the United States of America.--

Docket No. 0365-0491P

REMARKS

The specification has been amended to provide a cross-reference to the previously filed International Application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
James M. Slattery, #28,380

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Falls Church, VA 22040-0747
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/gf
0365-0491P

(Rev. 04/19/2000)

09/743910
2/PRTS
528 Rec'd PCT/PTO 17 JAN 2001

Method and system for controlling an Internet service

The invention relates to a method according to the preamble of claim 1 for controlling an Internet service.

The invention also concerns a system for controlling an Internet service.

Generally, the invention serves the control of an Internet service such as an e-commerce site. The control is arranged to be carried out using a telephone set. With the help of the telephone, the state and function of the service can be steered and reports on the progress of the service received.

Conventionally, Internet services have been controlled via a computer equipped with an Internet connection. Herein, an Internet browser or a Telnet connection has served as the user interface. Alternatively, the service has been arranged to be directly controllable from a server.

A disadvantage of the computer-based arrangement of access control to a service has been that the user needs a computer with an installed Internet connection facility. This complicates the control of the service and limits the user's freedom of movement. Furthermore, the cost of solving the problem by means of a portable computer and a wireless Internet connection becomes high.

It is an object of the invention to overcome the above-mentioned disadvantages and to provide an entirely novel type of method and system for controlling an Internet service.

The goal of the invention is achieved through arranging an Internet server to cooperate with an automated voice response system, a telephone set and a text message service.

In the control of an Internet service, the service user follows the instructions issued

by the automated voice response system. To proceed and activate the system functions, the service user issues commands through DTMF signalling and/or uttered phrases. The system response to the calling service user is transmitted as a voice signal or a GSM text message.

More specifically, the method according to the invention is characterized by what is stated in the characterizing part of claim 1.

Furthermore, the system according to the invention is characterized by what is stated in the characterizing part of claim 5.

The invention offers significant benefits.

A particular advantage gained through the use of a telephone set as the control terminal of a service is the easy accessibility of the service. For the control of the service, the service user only needs a telephone. Hence, the user does not require a computer or an Internet connection to gain access to the service. If the user possesses a cellular phone, the Internet service is available almost at any time and in any place. This feature is of a primary importance in operative information systems such as e-commerce sites.

In the following, the invention will be examined with the help of exemplifying embodiments by making reference to the attached drawings, in which:

Figure 1 shows a flow diagram of an embodiment of a system layout according to the invention; and

Figure 2 shows diagrammatically an example of the temporal progress of the method according to the invention.

Referring to Fig. 1, the subscriber first calls a voice response system 6 by placing a call from a telephone 1 via a telephone exchange 2. The voice response system 6 is

comprised of a physical server, a connection to the telephone network (through an interface card), a server software and an application capable of responding to incoming service user calls.

The application of the voice response system 6 submits the service user a menu from which the user selects a desired function. The selection is accomplished by means of dual-tone multifrequency (DTMF) dialling. Next, the application requests the service user 1 to submit required defining parameters. A message is then formed by the application from the submitted information. The message 30 is sent to the Internet server 3 via, e.g., a socket connection. The Internet server 3 in turn is connected to an Internet network 4 through which the service users 7 can make, e.g., purchases via said Internet network 4.

At the Internet server 3, the control application monitors a given port. At the receipt of a message 30 from the application of the automated voice response system 6, the control application interprets the contents of the message 30 and carries out the required actions. Next, the control application returns to the voice response system 6 via the same channel a message 31 of a successful or unsuccessful execution of requested actions. The additional parameters may also be used for transmitting other information such as a report compiled by the server.

The service user 1 receives from the voice response system 6 a message indicating the success status of the requested service. Alternatively, the voice response system 6 can send the information as a short message to the calling subscriber. The short message is sent in real time by establishing a connection 33, e.g., using the CIMD protocol to a short-message center 5 of the cellular phone operator. Next, the short-message center 5 handles the radio-frequency transmission of message 32 to the calling subscriber 6.

The application of the voice response system 6 and the Internet server 3 cooperate in real time, which means that the service user can receive the response to the desired action immediately during the progress of the call. Obviously, a plurality of

commands can be issued during a single call.

The voice response system can be replaced by a messaging device of an intelligent network (IP). In the context of the present invention, such devices and others capable of the same functions are more generally called voice message systems.

Now referring to Fig. 2, therein is shown the control sequence of a WWW server (including the actual WWW server, e-commerce software, control server, databases and the like) by means of an IVR (intelligent voice response) device comprising the following steps:

11. The IVR device offers a socket connection to a preset port numbered, e.g., as 2345, of the WWW server where the control server answers.
12. The control server accepts the connection and sends an acknowledge signal to the IVR device.
13. The voice response device requests the subscriber calling the service to submit an ID code and a password.
14. The service user submits the ID code and the password from the keypad of the telephone. The ID code and password are transmitted as DTMF signals to the IVR device.
15. The password is passed to the control server over the socket connection.
16. The control server performs a query on the database to verify the validity of the service user's ID code and password.
17. The result of the query is passed to the control server.
18. The control server passes the validity information of the submitted password to the IVR device via the socket connection.
19. If the password is acceptable, the IVR device reads the menu contents to the service user, while the entry of an unacceptable password or ID code is reported to the calling subscriber and the service is terminated.
20. In the first case, the service user selects one alternative from menu by depressing the respective key of his telephone. The DTMF signal is transmitted to the IVR device. If the calling subscriber selects to terminate the call, the flow diagram

proceeds to item 16.

21. Via the socket connection, the IVR device sends a command to the control server. Some of the needed commands are, e.g.:

"ping 1"	Check if e-commerce server #1 is open
"stats 2"	Statistics query on e-commerce server #2
"open 1"	Open connection to e-commerce server #1
"close 1"	Close connection to e-commerce server #1
"exit"	Terminate connection.

22. The control server updates or queries the service database in a desired manner. The updates are performed in real time. Thus, the calling subscribers gaining access to the WWW pages at any time have realtime updated information available, e.g., that the e-commerce server to be accessed is closed.

23. The information on the query results or success of data update is passed to the control server.

24. Via the socket connection, the control server passes to the IVR device the information on the execution status of requested function (0 = not successful, 1 = successful) and other possible messages such as the results of the database query. Some of the possible response messages are, e.g.:

"0 cannot open"	e-commerce server not opened successfully
"1 shop opened"	e-commerce server opened successfully
"1 visitors; 123 sales; FIM 53421"	Results of statistics information requested by the Stats command
"1 shop ok"	Response to Ping command when e-commerce server transaction found valid
"1 shop not working"	Response to Ping command when e-commerce server transaction found defective
"0 cannot ping"	Response to Ping command found unsuccessful

25. The IVR device processes the response message and query information by issuing a verbal message to the calling subscriber or, alternatively, by sending a text message to the subscriber. The sequence is restarted at item 19; or alternatively

26. The IVR device disconnects the socket connection to the WWW server.

27. A verbal message is issued to the subscriber on the disconnection of the service.

Without departing from the scope and spirit of the invention, embodiments different from those described above may be contemplated. For instance, the implementation of the automated voice response system can be utilizing advanced applications such as text-to-speech synthesis or speech recognition. Furthermore, the application of the automated voice response can be complemented with a pulse signal detection.

The Swedish Patent Office
PCT International Application

Claims:

1. Method for controlling an Internet service such as an e-commerce site, in which method the service provider is given a possibility of controlling and steering the progress of the service, in which method the control commands of the service provider are transmitted as dial tone signals (DTMF) via a telephone network (2) to a voice response system (6) that in turn passes the control commands in real time to an Internet server (3),

c h a r a c t e r i z e d in that

- said voice response system (6) transmits the acknowledgement information on a successful control action as a short message to the subscriber (1) controlling the system.

2. Method according to claim 1, c h a r a c t e r i z e d in that said voice response system (6) transmits the acknowledgement information on a successful control action as a short message using the CIMD protocol.

3. System for controlling an Internet service, the system comprising an Internet network (4), a plurality of service users (7) and at least one Internet server (3), said system having means for providing commercial services and controlling said services, said system including a voice response system (6) cooperating in real time with said Internet server (3), c h a r a c t e r i z e d in that said system includes a text message center (5) for transmitting acknowledgement messages to the subscriber (1) controlling the system.

Amended Sheet

[57] **Abstract**

The present invention relates to a method and system for controlling an Internet service such as an e-commerce site. The method offers the service provider facilities to control and steer the progress of the service. According to the invention, the control commands of the service provider are transmitted via a telephone network (2) to a voice response system (6) that further passes the control commands in real time to an Internet server (3).

(Fig. 1)

Translation of the EP 1 256 920 B1

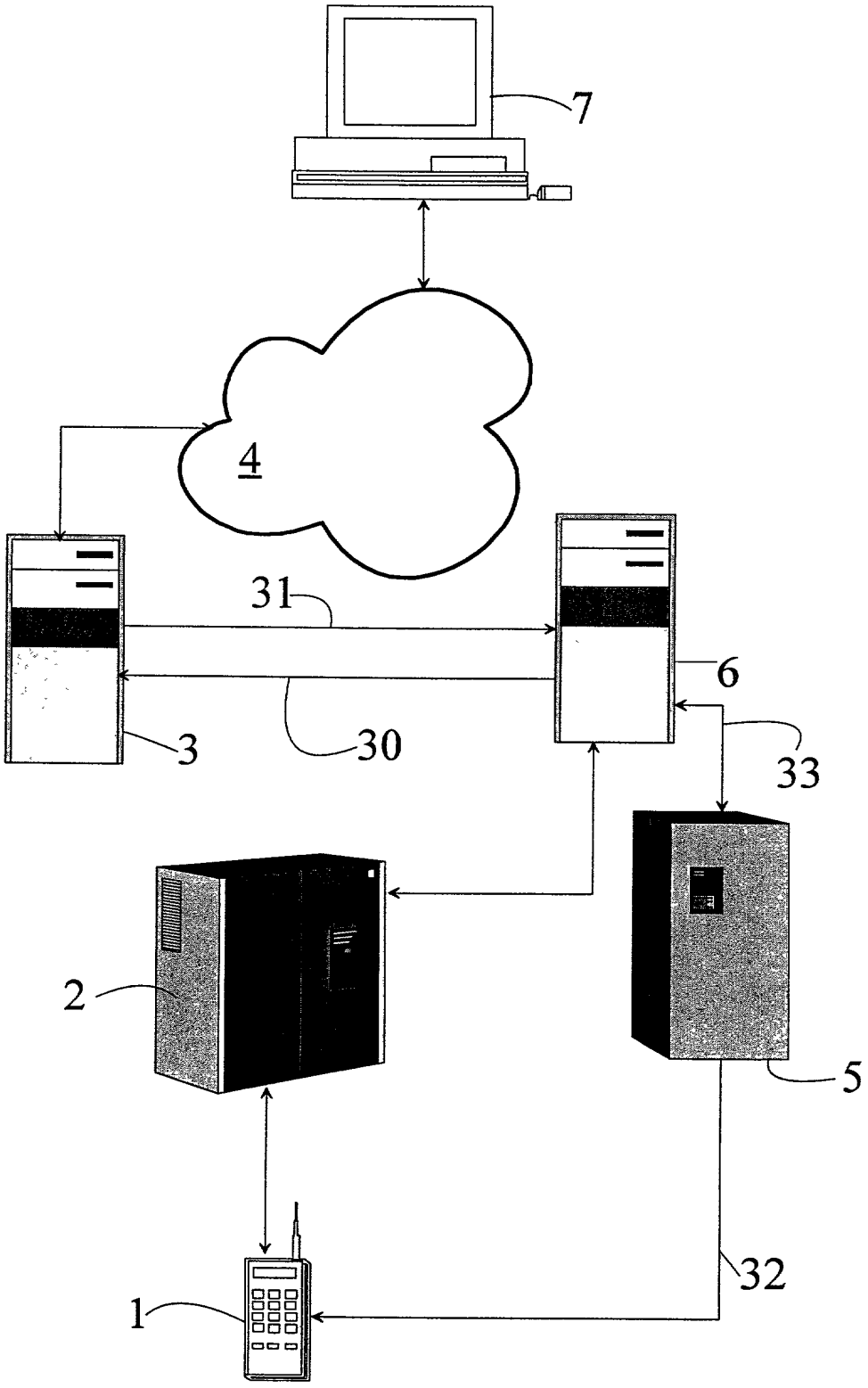

Fig. 1

09/743916

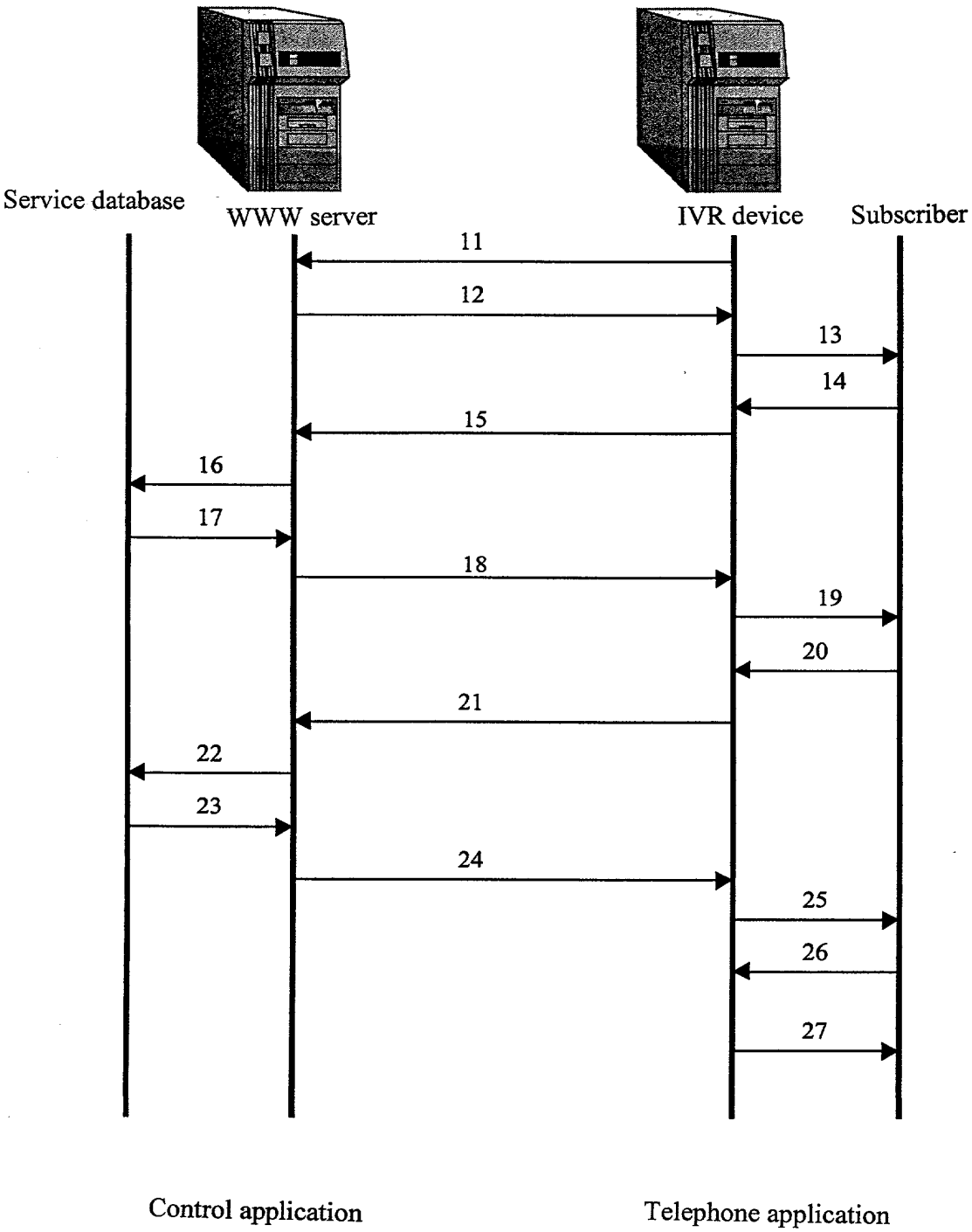

Fig. 2

BIRCH STEWART, KOLASCH & BIRCH, LLP

#3

PLEASE NOTE: YOU MUST COMPLETE THE FOLLOWING:

COMBINED DECLARATION AND POWER OF ATTORNEY

FOR PATENT AND DESIGN APPLICATIONS

ATTORNEY DOCKET NO. 0365-0491P

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated next to my name; that I verily believe that I am the original, first and sole inventor (if only one inventor is named below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Insert Title: Method and system for controlling an internet service

Fill in Appropriate Information - For Use Without Specification Attached:

the specification of which is attached hereto. If not attached hereto,

the specification was filed on January 17, 2001 as

United States Application Number 09/743,916; and /or

the specification was filed on July 15, 1999 as PCT

International Application Number PCT/FI99/00630; and was

amended under PCT Article 19 on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (six months for designs) prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as follows.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Insert Priority Information: (if appropriate)

Prior Foreign Application(s)

(Number)	(Country)	(Month/Day/Year Filed)	Priority Claimed
981637	Finland	July 17, 1998	☒ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

Insert Provisional Application(s): (if any)

(Application Number)	(Filing Date)

All Foreign Applications, if any, for any Patent or Inventor's Certificate Filed More Than 12 Months (6 Months for Designs) Prior To The Filing Date of This Application:

Insert Requested Information: (if appropriate)

Country	Application No.	Date of Filing (Month/Day/Year)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Insert Prior U.S. Application(s): (if any)

(Application Number)	(Filing Date)	(Status - patented, pending, abandoned)

I hereby appoint the following attorneys to prosecute this application and/or an international application based on this application and to transact all business in the Patent and Trademark Office connected therewith and in connection with the resulting patent based on instructions received from the entity who first sent the application papers to the attorneys identified below, unless the inventor(s) or assignee provides said attorneys with a written notice to the contrary:

(15)

Terrell C. Birch	(Reg. No. 19,382)	Raymond C. Stewart	(Reg. No. 21,066)
Joseph A. Kolasch	(Reg. No. 22,463)	James M. Slattery	(Reg. No. 28,380)
Bernard L. Sweeney	(Reg. No. 24,448)	Michael K. Mutter	(Reg. No. 29,680)
Charles Gorenstein	(Reg. No. 29,271)	Gerald M. Murphy, Jr.	(Reg. No. 28,977)
Leonard R. Svensson	(Reg. No. 30,330)	Terry L. Clark	(Reg. No. 32,644)
Andrew D. Meikle	(Reg. No. 32,868)	Marc S. Weiner	(Reg. No. 32,181)
Joe McKinney Muncy	(Reg. No. 32,334)	Donald J. Daley	(Reg. No. 34,313)
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PLEASE NOTE: YOU MUST COMPLETE THE FOLLOWING:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

1-00

Full Name of First or Sole Inventor: Insert Name of Inventor Insert Date This Document is Signed

GIVEN NAME	FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Kai	Salminen		January 12, 2001

Insert Residence Insert Citizenship

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2-00

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3-00

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4-00

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Full Name of Fifth Inventor, if any see above

GIVEN NAME	FAMILY NAME	INVENTOR'S SIGNATURE	DATE*

Residence (City, State & Country)	CITIZENSHIP

POST OFFICE ADDRESS (Complete Street Address including City, State & Country):

* DATE OF SIGNATURE